

**REVOX**

# **Operating instructions**

X44 DSP 4CH Amplifier

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# 1. Introduction

Congratulations on the purchase of your new X44 DSP 4CH Amplifier and thank you for the trust have placed in us by purchasing this high-quality product. Before using your Revox X44, you should observe the following instructions so that the sonic qualities can fully unfold.

**General safety instructions, disposal of your old appliance and warranty conditions** can be found in the enclosed leaflet.

Observe the signs on the device

To the risk of electric shock, do not remove any covers. Maintenance and repairs may only be carried out by qualified personnel!

## Unpacking

We recommend that you keep the packaging material for possible later transportation.

Please check the X44 DSP 4CH Amplifier and the accessories for completeness and transport damage after unpacking. Please read the operating instructions carefully before using the device.

Do not connect an appliance to the mains if it shows signs of mechanical damage or if liquid has penetrated it.

## Product description

The Revox X44 DSP 4CH Amplifier is a first-class 4-channel stereo power amplifier that has been specially developed for demanding audio applications. With its integrated digital signal processor (DSP) and flexible configuration options, it offers a perfect balance of performance, precision and ease of use.

## Performance features

- Power output: Selectable between 4 x 200 W at 8 ohms and 4 x 400 W at 4 ohms, ideal for a wide range of applications.
- DSP processor: Easy configuration and adjustment of acoustic properties via user-friendly software.
- Functions: Noise gate, matrix mixer, parametric equalizer (PEQ), crossover, delay, compressor
- Supported filter types: Butterworth, Bessel, Linkwitz
- Flexibility: Support for 70V and 100V systems as well as mono, stereo, free matrix and bridge modes.

## Areas of application

The X44 DSP 4CH Amplifier can be used universally and is particularly suitable for:

- Conference and meeting rooms
- Schools and educational institutions
- Restaurants and catering businesses
- Shopping centers and retail

## 1. Scope of delivery and equipment

- 4 inputs/4 outputs: DSP-controlled for maximum sound quality.
- Mini-USB connection: Simple configuration directly via the front of the device.
- Inputs: Four balanced XLR inputs for professional applications.
- Protection mechanisms: Integrated safety functions against short circuits, overload, high temperatures and more.
- Design: 1U height, optimized for installation in 19" racks.

## 2. Front X44



No.	Function	Explanation
1	Standby	Switches the device standby mode.
2	Power Light	Displays the current operating status.
3	USB Type B	USB connection for configuration and control.
4	Mute	Mute the device.
5	IPS LED	Display for status and function indicators.
6	Function Knob	Rotary knob for menu selection and setting.
7	ESC	Return to the previous menu item.

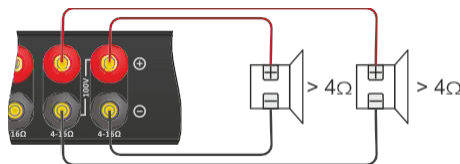
### 3. Connection panel X44 (rear)



No.	Function	Explanation
1	Power	Mains connection for the power supply.
2	Ground	Earthing connection for safe operation.
3	Output terminal	Speaker outputs for the amplifier.
4	RS232/RS485/GPIO	Interfaces for external control and communication.
5	Input Terminal Phoenix Connectors	Inputs for signal transmission via Phoenix connectors.
6	Input Terminal Balanced Input RCA	Balanced inputs via RCA sockets.
7	Link Out	Output for signal forwarding to other devices.

#### 1. Stereo wiring

The amplifier operates in stereo mode.



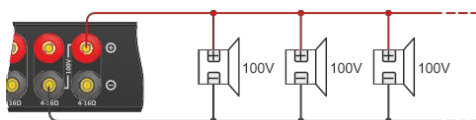
#### 2. Bridge wiring

The amplifier operates in bridge mode to achieve a higher output on one channel.

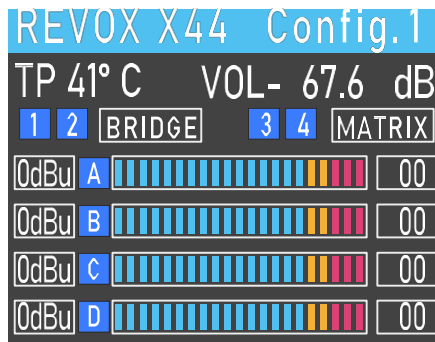


#### 3. 100V wiring

The amplifier operates in 100V mode for long cable runs.



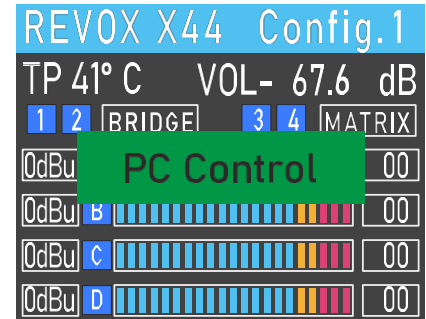
## 4. Display user interface



No.	Function	Explanation
1	Device name	the name of the device.
2	Temperature	Temperature display of the amplifier.
3	Channel muting	Indicates whether a channel is muted.
4	Current preset	Displays the preset used.
5	Master volume	Display of the overall volume of the amplifier.
6	Operating mode	the current operating mode of the device.
7	Channel volume	Display of the volume for each channel.

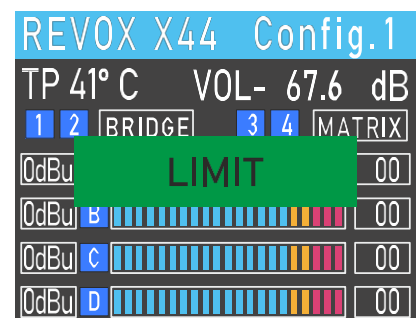
### PC Control" display

This message appears when the software on the PC is connected to the amplifier.



### Limit" display

This message that the output limiter is active.



### Menu page

the main menu page on the display.

MENU	
1	VOLUME
2	SENSITIVITY
3	PRESETS
4	STATUS
5	SOURCE
6	RENAME
7	LOCK: OFF
8	INFO
9	SCREEN
10	TRANSFER

### Volume menu

Volume control from -59 dB to muting of the channel.

VOLUME		
IN A	0.0dB	M
IN B	0.0dB	M
IN C	0.0dB	M
IN D	0.0dB	M
OUT 1	0.0dB	M
OUT 2	0.0dB	M
OUT 3	0.0dB	M
OUT 4	0.0dB	M

### Sensitivity menu

Two levels of sensitivity adjustment.

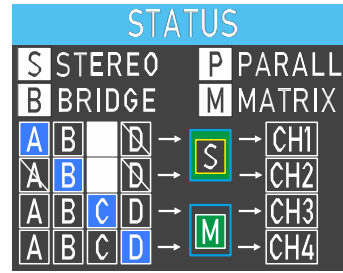
SENSITIVITY		
IN A	6dBu	0dBu
IN B	6dBu	0dBu
IN C	6dBu	0dBu
IN D	6dBu	0dBu

### Preset menu

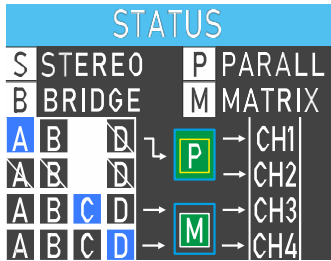
Loads a preset.

PRESET	
1	EFFECT 1 Pres
2	EFFECT 2 Pres
3	EFFECT 3 Pres
4	EFFECT 4 Pres
5	EFFECT 5 Pres
6	EFFECT 6 Pres
7	DEFAULT Pres
8	DEFAULT Pres
9	DEFAULT Pres

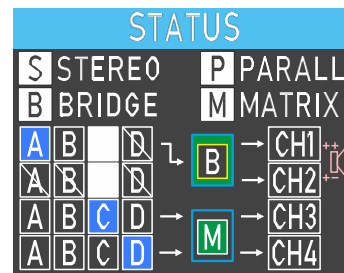
**Status menu**



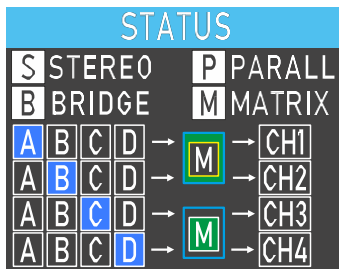
To change the operating mode from stereo to parallel.



For switching to bridge mode.



For switching to matrix mode.



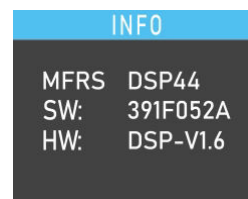
**Rename menu**

You can rename the device here.



**Info menu**

Displays manufacturer information such as the software version of the device.





The items are missing: LOCK ON/OFF, SCREEN, SETTING TRANSFER

## 5. Software installation and operation

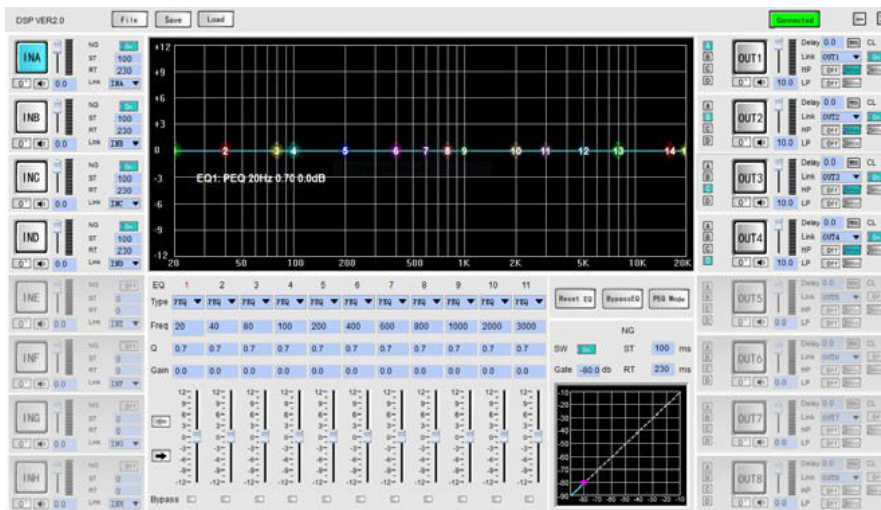
The DSP-V2.0 software provides a user-friendly interface for controlling one or more X44 devices. Configuration parameters can be saved in preset files, making it easy to retrieve and reset the settings for different applications.

### 1. System requirements

The DSP-V2.0 software is compatible with Windows operating systems versions Win7, Win8, Win10 and Win11 (x86/x64).

### 2. Software start and operation

Double-click on the DSP-V2.0 software to open the main menu.



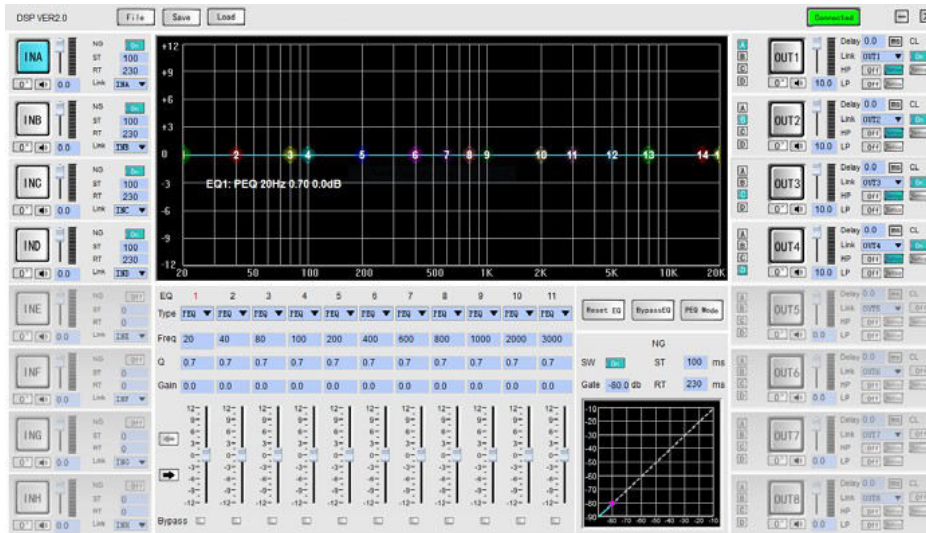
#### Important note:

Only one instance of the software should be opened on a computer at a time.

## 6. Operating the software

### 1. Main menu of the software

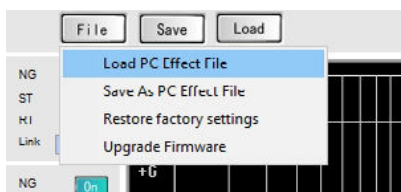
The main menu of the software consists of the following areas:



No.	Range	Description
1	Menu bar	Access to the main functions of the software
2	Input channel settings	Settings for input channels
3	Output channel settings	Settings for output channels
4	Routing settings	Connections between input and output channels
5	Graphic equalizer	Visual equalizer control
6	Parametric equalizer	Detailed equalizer settings
7	Equalizer selection	Selecting and adjusting the equalizer
8	Noise gates, voltage limiters and filters	Filter and noise gate settings
9	Software status display	Display of the current software status

## File menu

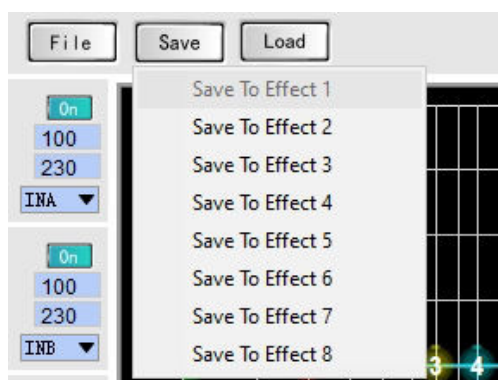
The file menu contains the following options:



No.	Option	Description
1	Loading a PC effect file	Loads a saved parameter backup file from the computer
2	Save as PC effect file	Saves the current settings for later use
3	Restore factory settings	Resets all parameters to the factory settings
4	Firmware upgrade	Enables software firmware to be updated

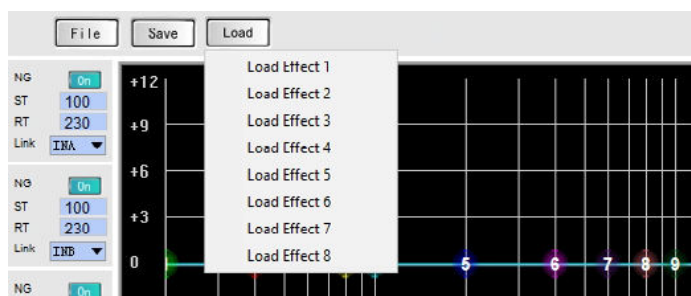
## Preset storage

The DSP software offers a total of 8 presets (7+1), whereby the first preset (factory setting) unchanged. The other presets can be adjusted and saved as required.

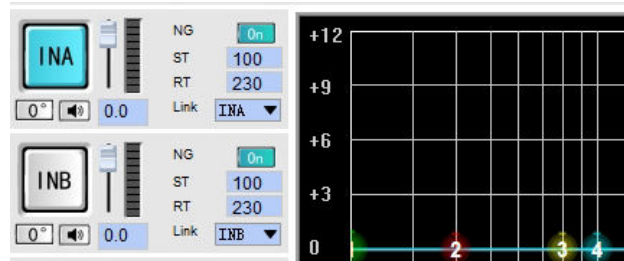


## Preset loading

The presets of 8 different scenarios in the DSP processor can be loaded.



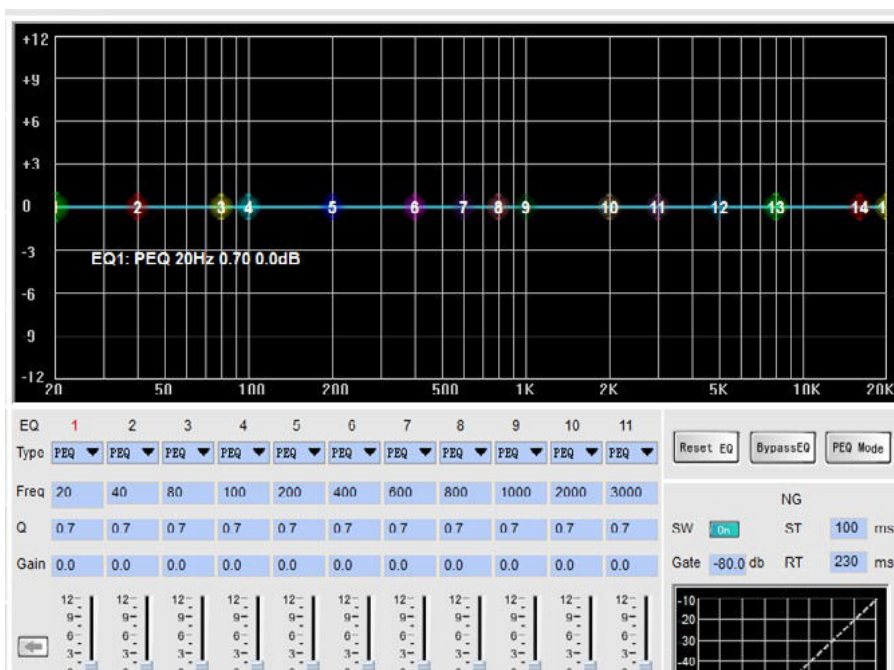
## 2. Quick settings for input channels



No.	Setting	Description
1	Extend channel setting range	Displays detailed configuration options (see Figure 5.1).
2	Phase adjustment	the phase inversion of the input signal.
3	Mute settings	Activates or deactivates the muting of the channel.
4	Gain adjustment	Allows the input level to be adjusted.
5	Noise gate switch	Switches the noise gate function on or off.
6	Activation time of the noise gate	Defines the time until the noise gate becomes active.
7	Closing time of the noise gate	Determines how long the noise gate remains open before it closes.
8	Parallel channel connection	Synchronizes the settings of all parameters of a selected input channel with other channels.

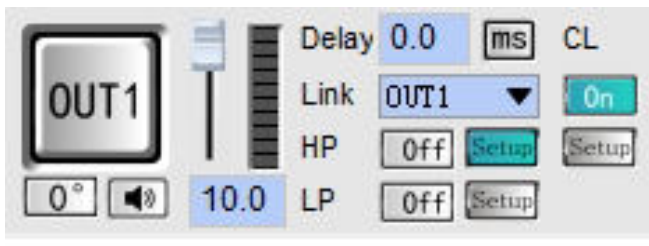
### 3. Input channel settings

The detailed settings for the input channels include, among other things:



No.	Setting	Description
1	Graphic equalizer	Drag the dots on the graph to adjust the frequency and gain.
2	EQ type	Select the desired equalizer type.
3	Frequency point	Enter the frequency point that you want to set.
4	Q-value	The higher the value, the lower the influence on neighboring frequency bands.
5	Numerical gain adjustment	Setting the numerical gain.
6	Pusher gain adjustment	Setting the pusher gain.
7	Switch equalizer directly	Switches the equalizer on or off directly.
8	Reset equalizer	Resets the equalizer to the default values.
9	Graphic/parametric equalizer	Choice between graphic and parametric equalizer (not currently used).
10	Balance control	Settings for the balance of the channel.
11	Low-pass filter	Activation and configuration of the low-pass filter.
12	High-pass filter	Activation and configuration of the high-pass filter.
13	Noise gate activation time	Time period until the noise gate becomes active.
14	Noise gate closing time	Time period until the noise gate is closed.
15	Noise gate threshold value	Signals below this value are ignored.
16	Noise gate switch	Switches the noise gate function on or off.

#### 4. Quick settings for output channels



No.	Setting	Description
1	Extend channel settings	Opens detailed configuration options for the output channel (see Figure 5.1).
2	Phase adjustment	Allows you to adjust the sound phase.
3	Mute switch	Mutes the channel.
4	Gain adjustment	Adjusts the volume of the output channel.
5	Low-pass filter switch	Activates or deactivates the low-pass filter.
6	High-pass filter switch	Activates or deactivates the high-pass filter.
7	Low-pass filter settings	Configuration of the cut-off frequency and slope of the low-pass filter.
8	High-pass filter settings	Configuration of the cut-off frequency and slope of the high-pass filter.
9	Voltage limiter settings	Adjustment of the limiter activation level and other parameters.
10	Voltage limiter switch	Activates or deactivates the voltage limiter.
11	Channel delay setting	the delay time of the channel.
12	Channel linking	Synchronizes all parameters with a selected output channel.

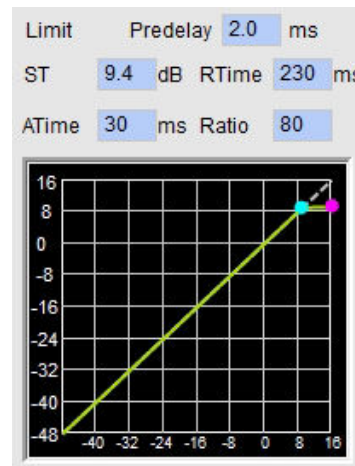
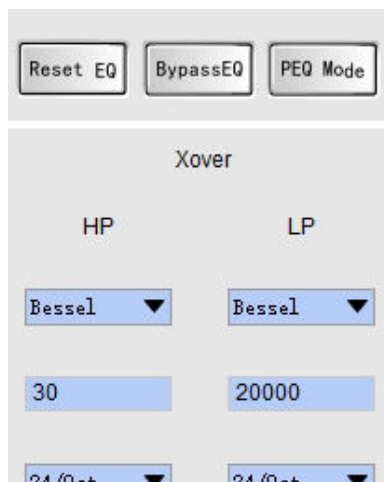


#### Input signal routing configuration

The signal sources for the output channels can freely selected, be it a single source or several combined signals.

## 5. Output channel settings

The detailed settings for the output channels include, among other things:



No.	Setting	Description
1	High-pass filter type	Selection of the filter type for the high-pass filter.
2	Low-pass filter type	Selection of the filter type for the low-pass filter.
3	High-pass filter frequency point	Setting the cut-off frequency for the high-pass filter.
4	Low-pass filter frequency point	Setting the cut-off frequency for the low-pass filter.
5	High-pass filter slope	Adjustment of the filter slope of the high-pass filter.
6	Low-pass filter slope	Adjustment of the filter slope of the low-pass filter.
7	High-pass filter switch	Activates or deactivates the high-pass filter.
8	Low-pass filter switch	Activates or deactivates the low-pass filter.
9	Delay setting	Configuration of the delay time for the output channel.
10	Voltage limiter activation level	Defines the level at which the limiter becomes active.
11	Voltage limiter enable level	Defines the level at which the limiter is deactivated.
12	Activation time of the voltage limiter	Determines the time until the limiter effect.
13	Compression ratio of the voltage limiter	Setting the ratio between the input signal and the limited output signal.

### EQ settings for output channels

The detailed configuration options for output channels correspond to the equalizer settings of the input channels and offer additional adjustments such as filters, limiters and delay.

## 7. Technical data

<b>Description</b>	4-channel power amplifier with integrated DSP processor
<b>Rated power (8 Ohm)</b>	4 x 200 W
<b>Rated power (4 Ohm)</b>	4 x 400 W
<b>Rated power (100V)</b>	2 x 200 W
<b>Bridge power (8 Ohm)</b>	600 W
<b>Loudspeaker outputs</b>	4 Ohm, 70V, 80V, 100V, mono, free matrix, stereo, bridge mode
<b>DSP functions</b>	EQ, gain control, crossover, delay, limiter, high-pass filter, low-pass filter, Butterworth, Bessel, Linkwitz 6-24
<b>Mini-USB</b>	For configuration, monitoring and control via PC software
<b>Frequency response</b>	L/H Cut OFF: 20 Hz - 20 kHz (+1/-2 dB) L/H Cut ON: 70 Hz - 10 kHz (+1/-3 dB)
<b>Inputs</b>	6 dBu, max. 16 dBu (4.9 V), balanced XLR, 4 channels
<b>THD</b>	< 0.1 % (1 kHz/-3 dB, 300 W)
<b>Signal-to-noise ratio (S/N)</b>	6 dBu: 94 dB, 0 dBu: 94 dB
<b>Crosstalk attenuation</b>	< -70 dB
<b>Gain control</b>	6 dBu: 30 dB (29.5-fold amplification) 0 dBu: 36 dB (31.1-fold amplification)
<b>Protection mechanisms</b>	DSP limiter, overtemperature, direct current, high frequency, short circuit, back EMF, peak current limiter, surge current limiter, start-up delay, overvoltage and undervoltage protection, mains fuse
<b>Display</b>	Color IPS LCD with 240 x 240 pixels, English user interface
<b>Power consumption</b>	1000 W
<b>Power supply</b>	AC input, switchable between 180 V - 260 V, 50 - 60 Hz
<b>Dimensions (W x D x H)</b>	484 x 300 x 44 mm
<b>Weight</b>	5.4 kg
<b>Input PEQ</b>	31 PEQ tapes
<b>Output PEQ</b>	10 PEQ tapes
<b>Crossover</b>	Butterworth, Bessel, Linkwitz 6-24
<b>Delay</b>	Input: 2 x 80 ms Output: 4 x 20 ms
<b>Compressor</b>	Knee, Threshold, Attack, Ratio, Release
<b>Limiter</b>	Threshold: -90 dBu to -21 dBu Release: 1", 2,895 ms
<b>DSP presets</b>	30 (including one factory preset)
<b>Interfaces</b>	USB, RS485, RS232, GPIO
<b>DSP channels</b>	4 inputs & 4 outputs



## 8. Troubleshooting and service

Make sure that the problem is not due to operating errors or external devices. Further information on troubleshooting can be found in the relevant section of this manual. If the problem persists, contact the warranty provider as specified in the warranty department.

### 1. Warranty conditions

The warranty is three years worldwide. It may vary depending on the country and is not the same for all products in every country. To find out the specific warranty conditions, please determine the country of purchase and the product type.

### 2. Specifications

All specifications are subject to change without notice.

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**REVOX**  
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